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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/443,455	11/19/1999	KONRAD WEGENER	852/48374	7275

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EXAMINER
EDMONDSON, LYNNE RENEE

ART UNIT	PAPER NUMBER
1725	16

DATE MAILED: 11/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-16

Office Action Summary	Application No.	Applicant(s)	
	09/443,455	WEGENER ET AL.	
	Examiner	Art Unit	
	Lynne R. Edmondson	1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *9/20/02* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 8-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 8-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-9 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Clark et al. (EPN 0008773 A1).

Clark teaches a method of forming a workpiece in a forming system which has at least one forming station comprising transporting the workpiece between stations and carrying out machining (cutting) with a laser energy feed to the workpiece (page 2 lines 18-22, page 3 lines 6-9 and page 7 lines 20-25) wherein the machining is fixedly arranged on the forming system (page 4 lines 7-17). The system operates at a predetermined cycle (page 10 lines 17-34). Machining may be carried out during transport of the workpiece (page 10 lines 5-16) or while the workpiece is stationary and situated on a depositing element (page 9 lines 5-17). See Clark claims 1 and 4 and figures 1-2.

2. Claims 1 and 6-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Dyble et al. (USPN 5597433).

Dyble teaches a process for forming workpieces in a forming system which has at least one forming station (figure 3) and a machining (welding) station (figure 4) wherein workpieces are transported to and from each station (col 2 lines 26-60 and figure 48)wherein welding is performed with a local energy feed (preferably ultrasonic but may also be heat sealing) (col 11 lines 13-16). The forming system operates at a predetermined cycle (col 17 lines 38-56). A carriage (transport) moves the workpiece during machining. The workpiece is deposited on an intermediate device (mandrel) during machining and is moved through the welding station which serves a rotary conveyance or transport device (col 9 line 59 – col 10 line 40). The machining device is provided with a welder (360) which moves perpendicularly to the original transport direction (col 10 line 52 – col 11 line 25). The transport device comprises rails (185) and a suction bridge (180) (col 7 line 54 – col 8 line 15) with guiding and manipulating elements (165, 170, 175) and a slide block (col 8 lines 15-49) to which the machining (welding) element is mounted (col 9 line 47 – col 10 line 40). The machining element is adjustable by moving transversely to the transport direction (vertical movement) (col 11 lines 5-25). The device is programmable (col 6 lines 59-65). A vertically moveable cross traverse (865) for lifting and lowering the workpiece is shown in figure 19 (col 18 lines 1-16). See also figures 1, 2 and 20 and Dyble claims 2, 4, 9, 18-21, 23 and 26-32.

3. Claims 12-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Bruns (USPN 5140839).

Bruns teaches a forming system comprising at least one forming station (first stamping station), means for transporting workpieces between stations a machining station (final stamping station) and a machining device arranged on the transport device (col 2 lines 50-64). However, the machining elements may also be fixed. The transport device has at least one suction bridge (cross bar with vacuum cups) moveably arranged on a rail with a guiding element and programmable manipulation devices (pivotal arms) attached to the machining elements (col 3 lines 31-56 and col 9 lines 20-32). The transport device has slide blocks (88) mounted to the machining elements for adjustment transversely (vertically) to the transport direction of the workpiece (col 4 line 42 – col 5 line 5). The manipulation devices have cross traverses (bars) and stroke elements for vertical adjustments (lift/lower) and are arranged to be moveable perpendicularly to the transport direction. Elements may also move linearly (forward/aft) (col 5 lines 43-67 and col 6 lines 31-51). See also Bruns claims 1-9 and 18-21 and figures 2, 3 and 9a-9c.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (EPN 0008773 A1) in view of Brandstetter (USPN 5012665).

Clark teaches a method of forming a workpiece in a forming system which has at least one forming station comprising transporting the workpiece between stations and carrying out machining (cutting) with a laser energy feed to the workpiece (page 2 lines 18-22, page 3 lines 6-9 and page 7 lines 20-25) wherein the machining is fixedly arranged on the forming system (page 4 lines 7-17). The system operates at a predetermined cycle (page 10 lines 17-34). Machining may be carried out during transport of the workpiece (page 10 lines 5-16) or while the workpiece is stationary and situated on a depositing element (page 9 lines 5-17). See Clark claims 1 and 4 and figures 1-2. However, there is no disclosure of an intermediate depositing device for situating the workpiece.

Brandstetter teaches a method of forming a workpiece which is transported between stations and situated on intermediate depositing devices between stations (col 3 lines 53-63 and col 4 line 56 – col 5 line 8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ an intermediate workpiece depositing device for simple control of workpiece movement (Clark, page 8 lines 9-12 and thereby facilitate material handing for high speed, highly accurate machining (Clark, page 2 lines 1-8).

5. Claims 2-5 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dyble et al. (USPN 5597433) in view of Morita et al. (USPN 4814576).

Dyble teaches a process for forming workpieces in a forming system which has at least one forming station (figure 3) and a machining (welding) station (figure 4) wherein workpieces are transported to and from each station (col 2 lines 26-60 and figure 48)wherein welding is performed with a local energy feed (preferably ultrasonic but may also be heat sealing) (col 11 lines 13-16). The forming system operates at a predetermined cycle (col 17 lines 38-56). A carriage (transport) moves the workpiece during machining. The workpiece is deposited on an intermediate device (mandrel) during machining and is moved through the welding station which serves a rotary conveyance or transport device (col 9 line 59 – col 10 line 40). The machining device is provided with a welder (360) which moves perpendicularly to the original transport direction (col 10 line 52 – col 11 line 25). The transport device comprises rails (185) and a suction bridge (180) (col 7 line 54 – col 8 line 15) with guiding and manipulating elements (165, 170, 175) and a slide block (col 8 lines 15-49) to which the machining (welding) element is mounted (col 9 line 47 – col 10 line 40). The machining element is adjustable by moving transversely to the transport direction (vertical movement) (col 11 lines 5-25). The device is programmable (col 6 lines 59-65). A vertically moveable cross traverse (865) for lifting and lowering the workpiece is shown in figure 19 (col 18 lines 1-16). However there is no disclosure of laser beam machining.

Morita teaches a system comprising at least one laser machining element (col 1 lines 6-7) for forming workpieces with at least one forming station (43) and at least one machining station (44) wherein workpieces are transported between stations (col 1 line 54 – col 2 line 9).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ laser beam machining elements as tools for a high speed, controlled heat sealing welds (Dyble, col 11 lines 13-16) easily and rapidly when forming thermoplastic materials without blow molding or extrusion (Dyble, col 1 lines 6-16).

Response to Arguments

6. In response to applicant's argument that the Clark reference is used for forming two dimensional rather than three dimensional contours, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

It is noted that instant claim 1 teaches a broad process of forming workpieces by moving the workpieces to or from a forming station and machining them by a local energy feed. Clark teaches a laser cutting process for cutting workpieces by moving (feeding) the workpieces to the forming (cutting) station and carrying out machining (cutting) of the workpiece with a local energy feed (laser energy). The machining is cutting and performed by a laser beam. The laser head is movable and in combination

with the punch can make three-dimensional contours by controlling the length and depth of the cut.

Therefore the 102 rejection of claims 1-9 and 13 as anticipated by Clark and the 103 rejection of claims 10 and 11 as obvious over Clark in view of Brandstetter stand.

7. Regarding applicant's argument that Dyble does not teach at least one forming station (col 14 lines 66-67) capable of some type of machining in three dimensions, the workpiece and machine (welder) can move linearly in at least two directions, vertically and in rotation (col 15 line 34 – col 16 line 49). The formed objects can have any size or shape with intricately formed surfaces comprising ridges or protrusions (col 16 lines 60-67). The protrusions may be formed by locally feeding mechanical energy from a pneumatic cylinder (col 17 lines 1-37). The machine may also form a flat blank into a "U" shape (col 2 lines 25-58 and col 8 lines 50-67). Ultrasonic energy is fed locally through the ultrasonic welder which contacts the parts to weld them.

Therefore the 102 rejection of claims 1 and 6-24 as anticipated by Dyble stands.

8. Regarding applicant's argument that Bruns does not teach a machining station with local energy feeding, Bruns teaches multiple stamping stations with the first station serving to form the part and the final station serving to finish or machine the part to the desired shape and size (col 2 lines 50-61 and col 1 lines 5-20). Each station is independently controlled (col 2 lines 50-57), operated (col 5 lines 43-68) and powered by a local motors (local energy feed) (col 7 lines 59-67 and col 10 lines 22-42).

Therefore the 102 rejection of claims 12-24 as anticipated by Bruns stands.

9. Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections. Dyble and Morita both teach forming systems wherein workpieces are transported through stations for forming and welding. Dyble teaches welding in a manner in which the tube is welded efficiently in a controlled manner. Laser welding and ultrasonic welding are both known and conventional.

Therefore the 103 rejection of claims 2-5 and 25 as obvious over Dyble in view of Morita stands.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rolli et al. (USPN 4947014, laser welding, contouring sheets to form cans, stations), Kimbrell (USPN 3656385), Pryor (USPN 5380978, laser cutting/machining angles into sheet metal, stations), Deane (USPN 3578935), Hofele et al. (USPN 5842370), Nashiki (USPN 5359872, station, forming contoured metal parts, laser), Yoshiaki (USPN 5500507), Vanderzee et al. (USPN 5782129) and Klingel (USPN 4698480).

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynne R. Edmondson whose telephone number is 703-306-5699. The examiner can normally be reached on M-F from 7-4, with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 703-308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3599 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Lynne Edmondson
Examiner
Art Unit 1725

LRE
November 22, 2002

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